Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

which may, therefore, ere very long, reasonably expect to be the first town in Queensland to receive the English news through the Indian and Australian telegraph-wire.

MONTHLY MEAN TEMPERATURES at ADELAIDE POINT, PORT DENISON, QUEENSLAND.

MONTH.	9 A.M.	3 P.M.	9 P.M.
1863.			
December	79·9	82·8	78·3
1864.			
January	80·6	83·8	78·7
February	80·3	83·2	79·9
March	79·6	82·1	78·1
April	74·8	79·9	71·6
May	69·9	75·2	70·2
June	61·8	70·2	64·9
July	61·9	68·7	62·5
August	66·0	72·3	67·2
September	70·9	75·7	68·1
October	78·7	81·4	77·4
November	79·2	82·4	78·6
Mean	73·6	78·1	73·2

4. *On vast Losses of Land on the Westerly Coasts of France within the historical period.* By R. A. PEACOCK, Esq., Jersey.

Mr. PEACOCK has forwarded a memoir to the Society, giving an account of his researches in the various ancient records of great losses of land by inroads of the sea in the Channel Islands, and on the opposite coast of France. He has arrived at the conclusion that these phenomena are due to successive sinkings of the land which have taken place between the middle of the second and the middle of the fifteenth centuries. The following extracts from the memoir contain some of the principal facts which he has accumulated:—

Losses of Land in St. Ouen's Bay, Jersey.—An ancient MS. is alleged to state that, in the year 1357, the sea engulfed a very rich district of land in the parish of St. Ouen, and that the registers of the Exchequer make mention of a people who inhabited this portion of land. The little islet where Elizabeth Castle stands was detatched from *terra firma* about the year 687. The following is from a local paper, 'Gazette de l'Ile de Jersey,' 28th April, 1787:—"The trunks and roots of trees which showed themselves last winter by the agitation of the sea in St. Ouen's Bay, and which are still visible, furnish us with a subject of contemplation relating to times very remote. One sees thousands of trees laid one close to another in this bay, from the Corbière to the two banks of sand at some miles from high water." These banks—Rigdon Shoal and Great Bank—appear on the chart at *two and three miles distant from the coast.* "Amongst these trees one might see some very large; and we are assured that after a storm from certain quarters it happens that it is very difficult for carriages to pass over the sand." On April 26, 1861, at St. Aubin's, Jersey, the Rev. G. J. Le Maistre, head master of the Grammar School there, made the following statement, which the present writer took down in writing. He said that 50 or 60 years ago his father, who is now dead, saw a good many stumps and roots of trees, standing apparently *in situ* where they had grown, below low water. They were near L'Etac village, near the north end of St. Ouen's Bay.

Vice-Admiral White, a resident of Jersey, and who has since died there on July 2, 1865, was formerly Captain Martin White, R.N., and by direction of the Admiralty made a survey about 1822, which he corrected up to 1840; with very numerous soundings of the Channel Islands' seas. On May, 22, 1860, the Admiral stated to the present writer that "in taking soundings he saw two or three stumps of trees in St. Ouen's Bay, a little outside of low water. They were fixed on the soil, or sea bottom, near La Pule, or Pinnacle," *i. e.* a little north of L'Etac.

April 27, 1861, M. le Feuvre, of Le Hogue, St. Peter's, a native and owner of property in Jersey, personally informed the writer that there are quantities of submerged trees in St. Ouen's Bay, due west of the pond, which is in the centre of the bay. He has seen two *in situ*, with upright trunks broken off, at two or three feet high. He and the writer went to look for them at low water of an equinoctial spring-tide, but they were covered up, as they often are, by the wind and waves having drifted sand over them.

Stumps of trees found in situ below high water near St. Helier's, and in St. Aubin's Bay.—In the newspaper 'Chronique de Jersey,' 7th April, 1847, it is said, "The excavations which are now making to lay the foundations of the new north pier, happen to add incontestable proofs in support of the assertion of many historians, that the works on which Elizabeth Castle and the Hermitage are built, formed in ancient times part of the shore; that is to say, that the large space known under the name or the Bay of St. Aubin was covered with earth, and elevated above high water. At five or six feet deep, the workmen found a rich vegetable earth, and a profusion of roots of trees in a perfect state of preservation."

On May 7, 1865, the present writer found numerous stumps of trees with roots evidently *in situ*, where they would be covered from 15 to 20 feet with water at high tide, on the north-west of the long pier of the new harbour of St. Helier. Several of the trunks were from one to five yards long, and some of the trees when entire had been as thick as a man's body. I took two specimens to Birmingham, and exhibited them before the geological section of the British Association on September 9, 1865. Mr. Jurat Nicolle says that nuts, as well as stumps and roots of trees, were found in sinking the foundations of the new pier.

To the south-west of the Engineers' Barracks, which are on the south of St. Helier, is a marine rock called *La Quesnais. Quesne* signifying in the ancient language the modern *Chéne*, an oak; and *Quesnais* means a wood of oaks, *i. e.* plural number, as if formerly there had been a forest of oaks there. The Quesnais is a full mile seawards from present high water. It is covered at high water. In 1865, Captain Ranwell, R.N., informed the writer that he was at Jersey with his ship in 1812, and there were then to be seen stumps of trees near low-water mark, in the north-west part of St. Aubin's Bay, near St. Aubin's Castle. He did not see them, but several of the ship's company saw them. The highest tides in St. Aubin's Bay rise 42 feet.

The obsolete French word "grune" signifies *low marshy ground.* The word occurs a good many times on the chart of the Channel Islands' seas.

The Ecrehous and Dir-ou-illes.—The Ecrehou isles are six English miles north-east from the north-east angle of Jersey. Maitre Isle, the principal islet, is now very small (the rest are mere barren rocks); by measurement, on May 20, 1864, it was found to contain only 2A. 2R. 15P. within high-water mark, of which a part is entirely destitute of soil, there being only 2A. 0R. 34P. cultivable. Its highest point is stated in the late Admiral White's 'Sailing Directions,' 1846, p. 223, to be 36 feet above high water, but it did not appear to the writer to be so much. The islet produces only grass and some luxuriant plants of the *Lavatera arborea*, or Sea Tree-Mallow; there is neither shrub, nor bush, nor any fresh water. Its extreme length and breadth are 188 yards by 100 yards, and it contains parts of two walls which once formed an angle of the ancient chapel. There are a few huts for the use of those who go for a week or two in summer to gather sea-weed and catch lobsters. The whole group of Ecrehou rocks is about three miles from E. to W., and nearly a mile from N. to S. At a little distance W. commences another group of barren rocks called the Dir-ou-illes, occupying a nearly circular space of about two miles diameter. Maitre Isle must necessarily have formed part of a much larger island within the last six centuries, for various reasons. For, though it is now uninhabitable for want of wood and fresh water (which are not to be had at a less distance than six miles), and on account of its smallness, it had once a sufficient number of inhabitants to induce the diocesan to send two monks to celebrate mass daily in the chapel. Because, as the Rev. G. J. le Maistre well observes, at S. Lo, in the archives, is a parchment referring to the tithes to be received from the curé of the "parish" of the Ecrehous, in Jersey. From which he justly infers, that as it was a *parish*, there must necessarily have been *cure of souls*, and consequently *inhabitants*. And there is also another parchment referring to a village and church of Luneville, in the parish of Grouville, at La Roche ("ad Rupem"). It is scarcely necessary to say there is no village or church of Luneville there now.

Only one angle of the chapel of Maitre Isle now remaining, no judgment can be formed of its original extent. The late M. de Jerville, of Valognes,—a learned antiquary, who studied western Normandy for forty years, and copied five or six thousand pages of records of cathedrals, monasteries, chateaus, and hospitals,—gives a copy in Latin of a charter dated 1203, by which Peter de Pratel gives to God, and to the monks of the church of Holy Mary of Val Richer, for the salvation of the soul of John, king of England, who gave him the islands, the isle of Escrehou in its entirety, to build there a church (*basilicam*) in honour of God and Blessed Mary, so that Divine mysteries may be celebrated there daily, and the abbot and monks are also to possess whatever they shall be able to build up and erect in the said island. This charter M. de Jerville quotes, he says, from 'Gallia Christiana,' and he says it is recorded in the same volume that Gabriel . . . . . , Abbot of Val Richer, sent two monks in 1337, on Thursday before Palm Sunday, to keep and preside over the chapel of Blessed Mary of Escrehou. This is the last we hear of the use of this church or chapel. In a book of the King's rents in Jersey, made in 1607, is an account of wheat-rents due for Ecrehou from the heirs of John le Hardy, gent., and others, which corroborates the fact of their having been a priory or chapel in Ecrehou. Thomas Blampied, of Rozel, who rowed the writer to Ecrehou, May 20, 1864, stated that he had seen in 1861 a stump of a tree which he thought stood where it grew, about 300 yards east of the rock called Gros Tête (which is half a mile N.W. of Maitre Isle), about at extreme low water. Joseph Blampied, of the Glory Inn, Rozel, has seen stumps of trees fixed in the gravel about at extreme low water, between Le Viél rock and Le Bèçus; these rocks are somewhat farther N.W. than Gros Tête. There is a ridge of gravel containing about 12,000 cubic yards among the Ecrehou islets. But neither here nor anywhere else amongst the Channel Islands is there anything approaching to a sufficient amount of gravel to account for the missing territories as having been merely washed away. If the Ecrehous and Dir-ou-illes have been formerly at a considerable elevation, they would have been habitable and worth inhabiting, and may have contained brooks and springs, in other words, fresh water. And we learn from Lecanu's vast historical researches (see his preface) made for his 'Histoire des Evêques de Coutances,' at p. 448, about the Ecrehous, that "Ils ont dû présenter autrefois une étendue bien plus considérable au-dessus des flots."

As the last date is 1337, it appears probable that the Ecrehous and Dir-ou-illes sunk like the rest in 1356, which was less than 20 years after.

Amongst the Channel Islands some of those now too small and rocky to be habitable, have as part of their names *hou* or *ou*, which, according to M. de Jerville, in the Teuton or Danish language means "house." M. Edouard le Hericher, too, in his 'Glossary' (on Germanic origins), says that *hou* is a common affix in topographical names in the sense of habitation, the *house*,—as Néhou, Quettehou, Pirou, Bléhou, Lihou (rock of Granville), Tatihou (isle of). If these things be so, the fact is very significant. For then we have Ecre*hou*, or the Ecre-houses; Dir-*ou*-illes, or the House Isles; also, Brecq-*hou*, near Sercq; Bur*hou*, near Alderney; Jet*hou*, near Herm; and Li*hou*, west of Guernsey. And we enquire whether these very "Hous," *i.e. groups of houses*, or *towns*, were not, in fact, the very towns mentioned by Cæsar, Lib. 3, sec. 12, which gave him so much trouble. It is plain there were once plenty of houses, and consequently of inhabitants, in the places named, where there is now scarcely house or inhabitant! F. C. Lukis, Esq., of Guernsey, an accomplished geologist, antiquary, and naturalist, states at p. 525 of 'Duncan's History of Guernsey,' something which would appear to signify that the Isle of Herm must once have been plentifully inhabited. He says that "the quantity of limpet-shells exposed over the surface, or occasionally dug up, *shows the vast use of these by the early inhabitants*, and in some places they are found *at a distance from the cottages*, and at a depth of many feet below the soil. Beds of limpet-shells are not unfrequently cut through in the Isle of Herm, where it is difficult to account for their accumulation." It may be observed that if there were formerly plenty of *Hous*, or houses, at Jet*hou*, which is near Herm, the "shell-middings" would be accounted for.

Losses of Land on the Norman Coast, on the west and north-west of Coutances.—The Seigneurs of Mont Chaton, near Regneville, possessed at the end of the river which passes by Coutances, for all time, the fishery of that little river as far as Roqui, Ranqué, or Ronquet, a rock well-known, which is now 2¼ *English miles in the sea.* Conformably to their title, they had fished for all time also in the sea as far as that limit; but their administration commenced an action in 1789, founded on this, that their right of fishing could not extend beyond the river. And two months before the Revolution they established before the Parliament of Rouen, 1st, that their title gave them a right of fishing as far as Roqui, *the place where the river of Coutances discharged itself into the sea*; 2ndly, that since a long time, it is true, *the sea had invaded the land bordering on the river*, but that that had not destroyed their right of fishing the ancient bed of the river; 3rdly, that otherwise there existed still all along the ancient shores the *trunks of willows visible in the water*, which thus settled the limit where the right of fishing could be exercised. By these reasons the Seigneur of Chaton won his action, and the Parliament confirmed to him his right of fishing. This decree may be found in the archives of France, in the last volume of decrees of the Parliament of Rouen.*

---

* 'Tableaux Historiques de Jersey,' par J. P. Ahier, 1852, p. 97.

A few years ago a fisherman dredging for oysters near the oyster boundary, which is about 3 to 4 miles from the west coast of Normandy, brought up the stump of a tree with portions of the roots attached, which was identified as a plane-tree.

In Lecanu's 'Histoire des Evêques de Coutances,' as a preliminary to writing which he made vast researches, he says: "A vast marsh called Chescy (Scissiacum), covered with forests, filled up all the space now occupied by the ocean from the coast of Brittany as far as Cherbourg, or the Val de Saire, widening itself at the side of Chausey and Jersey over a depth now unknown. The dimensions of this marshy ground cannot now be defined, but this is what we know: in the first place we have assured ourselves that from S. Pair (about two miles south of Granville) to Cape la Hague there exist very numerous stumps of trees rooted in the clay of the shore."

Considering the distance to which the Banc du Viellet (formerly land probably) extends towards Normandy, and the distance westward to which the west coast of Normandy once extended, the statement as to Roqui, and the root found by the oyster dredger in connexion with Lecanu's statement just given, we may consider the interval between Jersey and the Continent to have been in part bridged over.

My friend the late Mr. John Patriarche Ahier, in his 'Tableaux Historiques de Jersey,' gives a map exhibiting a much greater tract of land in the Channel Islands' seas than now exists. All along the west of Normandy the land is shown by M. Ahier as extending farther west, and in particular as extending to and including the Ecrehous and Dir-ou-illes. More land is shown on the west, south, and especially on the south-east of Jersey; and he shows the Minquiers rocks and all the present sea on the south, south-east, and east of them as land. This (supposed) land is represented as being crossed in four various directions by Roman roads; and he states (p. 93) that "the line of the Continent commencing at the Isle of Ushant came by a curve to bear upon (s'appuyer) Guernsey and Alderney, which were only promontories of the Continent, and thence to Cape la Hague. All the isles and rocks which now occupy the sea in the triangle formed by Ushant, la Hague, and Mont S. Michel, were nothing then but elevated points of a considerable portion of the Continent which has disappeared since." The revolution, he says, according to some, has been caused by a volcanic commotion, which produced a sudden sinking of all the countries of about 150 feet. According to others, he says, "It came to pass by reason of an enormous rise of the waters of the globe, coming unexpectedly by the melting of the Polar ice." I agree with M. Ahier so far as this, namely, that there had been sinkings (at about nine different periods), which may have amounted to 100 or 120 feet. And if Abbé Manet's figures are to be relied on, to as much as 176 English feet at Mont St. Michel. I do not think that many others except Mr. Ahier and myself in this locality believed even so much as that. There have been locally several objections made; such of them as are most important will be adverted to in this memoir as opportunity arises.

Losses of Land in the Bay of Mont St. Michel and near St. Malo.—The late Abbé Manet published at St. Malo, in 1829, a small 8vo. volume entitled 'De l'etat ancien, &c., du Baie du Mont S. Michel, et de Cancale,' &c. He has undoubtedly rendered great service to science by collecting and narrating, as a historian, a large number of important physical facts. These are here distinguished by the letter M when quoted. He appears to have had no thought as to what may really have been the cause of the sea's overwhelming the forest of Sciscy on the occasion of an equinoctial spring-tide propelled by a strong north wind. And especially he assigns no reasons why the water did not ebb off again; nor why that which was the forest of Sciscy up to, and into, the year 709, has been a navigable sea ever since.

Some have thought the Abbé has been too credulous. Partly to satisfy himself on that point, but chiefly to obtain what other evidence he could, the present writer devoted a month's hard work at the British Museum, in July and August, 1861, in searching and making extracts. In the southern parts of the Channel Islands' seas there appear to have been sinkings in the 6th century (M.), the 7th century (M.), 709 (M.), 811 (M.), 891 (M.), 1163 (M.), near St. Malo, in 1244; M. Bonissent, a member of the Société Géologique de France, quoting 21st vol. of 'Dom Bouquet's Historians of France,' says a formidable tide inundated our shores anew in 1244, and extended as much as 24 kilomètres (about 15 English miles) over the land, and so completed the destruction which began in 709. The date of the submersion, around at least three sides of Jersey, was, as we have seen, 1356. Of the date of the submersions about Guernsey I have met with no record. Another submersion took place near St. Malo about in 1437 (M.); since which date all appears to have been stationary, except on the west of Brittany, where a sinking is said to have occurred so lately as 1827. (M.)

Of all these that of 709 was by far the greatest. Of the effects of previous "inundations" there is probably no record. Abbé Manet describes the inundation of 709 as having been unhappily sustained by a terrible north wind. It commenced at St. Pair, a small village about 2 English miles south of Granville. "The environs of Chausey first yielded to its attack, and the tempests continuing to unite their fury to the efforts of the subsequent tides, produced at last the most frightful changes. All disappeared under the waters, with the exception of the mountains which form the islands, and a portion of the forest intermingled with meadows, which was spared for a time on the coast of Avranchin. . . . . The storm changed the course of the Couësnon and gave to the ocean nearly all the portion of the bay which belongs to Normandy." (M., p. 11.)

It destroyed all the land for a distance of 3 English miles westward of Cape Lihou, near Granville, as well as the land enclosed by an imaginary nearly straight line drawn from the point at 3 miles west of Cape Lihou, to the promontory of Cancalle. But the ravages of the sea, in 709, were not confined to this. It began again, he says, in le Verger, in the commune of Cancalle, and destroyed all the land from le Verger to Cape Frehel, being 21 miles in length and often as much as 2 miles wide. The submerged part first mentioned averages about 18 miles long by 9 miles wide, so that in the whole there was a loss of about 200 square miles, within the districts named. Beyond Cape Frehel he says he has no intention to follow it. (M.)

Not quite the whole of the land in question was destroyed in 709; the isle of Cezembre was still joined to the continent in 1108, and a tract of meadows extending from St. Malo to Cezembre, 2½ miles in length, and called the meadows of Cezembre, was part of it covered by the sea in a moment in 1163.* But the whole of the meadows were not lost till about 1437, which is the date of the last account we have of them.

The sea swallowed up all the flat country in view of the town of Aleth (the cité part of St. Servan). We are certain the disaster there was considerably greater, since this territory was much more populous than the other. Its devastations commenced at Cape Frehel, which *disappeared in a moment.* The assault of the waves *carried away also at the same instant* all the shores occupied by St. Jacut. It made breaches in five or six places in the long chain of rocks which prevailed from the east of Cezembre to the point of Mingar in St. Coulomb (this last place is 4 miles west of the point of Cancalle), and gave passage to the torrent. "At last the lands which joined the two arms of the river Rance were overwhelmed in their turn, and the new deluge rapidly gained an entrance to what is now the harbour of St. Malo. It spread itself afterwards on one side into the meadows called la Hoguette and des Joncs, which border the high road leading from la Hoguette to Paramé, and on the other side into all that extent which we now call the Marais Rabot, Little and Great Marshes, &c. It extended even to the heights of Paramé, Tertre au Merle, la grand Rivière, and even to Frontu and du Vallion as you go to Chateau-Malo and St. Meloir. The Rance, which was only a large stream from Aleth to Dinan, acquired by the same event a considerable breadth and depth to above St. Suliac, a town about midway between those two places." (M.) The district he describes extends to about 5 miles east of St. Malo, by perhaps half as much in breadth. Do not this remarkable "swallowing up," "disappearing in an instant," &c., signify that the ground had sunk?

---

* Jan. 1, 1159 (or, as some say, 1161), the town of St. Lo experienced a severe earthquake.

The storm changed the course of the river Couësnon, which is the boundary between Normandy and Brittany, and gave to the ocean nearly all the portion of the bay which belongs to Normandy. It gained the whole of the following seven parishes, viz.: St. Benoit-des-Ondes, la Fresnaye, and it completely destroyed the land as far as the marshes of Dol, which it inundated in autumn 811. It destroyed the parishes of St. Cherueix, St. Broladre, St. Marcan, Ros-sur-Couësnon, and St. Georges-de-Grehaigne. (M.) To these M. Ogée adds Tommen or Thomen, 3 miles south of Cancalle Point. It is now only a rock, but was, until the 14th century, a parish of great extent. The parish of Bourgneuf was not submerged until about the 15th century. The sea uncovers sometimes portions of walls which formed houses. The parishes of St. Louis, Maunay la Feillette, and Paluel, existed until the 12th century. Gifts of property situated in those parishes, made to the Abbey of Vieuxville, attest their existence. The synodal books of the bishopric of Dol bear their names up to 1664. There are also missing the parish of Vivier, the great village of St. Anne, a town called Moulin du Buot, the isle of Herpin, and the port of Winian. (M.)

The sea inundated a tract of land from the Bay of Mont St. Michel nearly to Dol, comprising 26,000 acres, or nearly 40 square miles. The embankment by which it has been recovered was commenced in 1024. (M.)

The lost territory from Chausey to Dol was covered with a thick and sombre forest—the Forest of Sciscy. It was crossed by a Roman road, as shown on the chart. This desert, filled with wild beasts (præbens altissima latibula ferarum), was also scantily peopled by certain half savage pagans, and, in Christian ages, by a crowd of anchorites. Another forest extended from the Bay of Verger, which is 4 miles west of Cancalle Point, to Cape Frehel. (M.)

In his note 26, Manet gives references to about eighteen authorities, to prove the fact of the former existence of the forest of Sciscy. Some of these the present writer has been enabled to consult, and will quote them presently. Meantime the substance of the Abbé's personal testimony is now given from his note 26.

He mentions "the immense quantity of trees of all species which have been disinterred for ages from the sands of Mont St. Michel, on the coasts of Granville, and especially in the marshes of Dol, &c., where the sea does not impede the workmen. These trees, which are commonly oaks, have preserved their form, their bark, and some of them even their leaves. Their long sojourn in the mud has in the meantime altered their substance a little, and given them, when they are burnt, a sour odour which causes hoarseness, but when the water which has penetrated them is evaporated, their wood, which was soft, becomes compact and acquires great hardness. It takes almost the polish of ebony, which it resembles in colour; and it makes very pretty furniture." It is used for espaliers and in the construction of houses, which are especially seen in the Isle *de Mer*, 1° 51′ w. long., 48° 33¾′ lat., 3½ miles inland.

The inhabitants of the marine islands near St. Malo call these trees "canaillons," the workmen call them "coërons." (M.) The name Ile *de Mer* is significant.

"During the famous hurricane of January 9, 1735, the agitation of the sea was so great on the sandy shore of Mont St. Michel that it ejected from the sand a prodigious quantity of these logs (billes), which were always found lying from north to south; which proves, independently of history, that these trees were not thrown down confusedly here and there, but that the tempest to which they owed their ruin blew from the north." * (M.) *Note.*—This alleged direction of the prostrate trees is not concurred in by other authorities.

"The submarine trees on our shores are covered with about 2 feet of mud, at extreme low water, at St. Suliac and the Bay of Dinard, drawing near the little port, if we may believe M. Brisart, who says he has seen them more than once. In nearly all the other slopes which border the coast on the west these stumps are scarcely deeper. Especially in the bays of Port Blanc, la Garde Guerin, la fosse au Vau, in St. Lunare, and Port Hue, in St. Briac." (M., p. 90.)

The places named the Grande Bruyère and the Cardequint, between Mont-Dol and the Isle-Mer, are especially remarkable for the acorns, beech-mast, hazel-nuts, &c., well preserved, which one encounters at 6, 8, and 10 French feet deep, from which (he thinks) it is natural to conclude that the entire overthrow of the forest of Sciscy in this part was not effected until the approach of autumn. The custom of the borderers, in order to discover the stumps, is to sound the earth with long spits of iron, and to dig in the places where the spits find a resistance. (M.)

"There is a rock called l'Evêque, in the middle of the Bay of Guesclin [west of Cancalle Point], which can only be walked on at low water of spring-tides, but which was formerly a strong place. Possibly the little port of Winian was situated there, or near the ancient canal of Guyoul. It is certain that all the old writings up to 1032, when it ceases to be mentioned, agree in saying that this port was not far from Cancavan, which is our modern Cancalle. The shoals of Petit Pointu and the environs of Isle Chevret, and the isles Conchés, Césambre, Harbour and Loubras were well peopled." (M. p. 9.)

Lost Monasteries and Ancient Town.—Probable Amount of Sinking.—Remarks.—Abbé Manet and others give the names and positions of several monasteries, and the former gives also the name of a "Bourg" or town, which were once standing in that part of the forest of Sciscy now overwhelmed by the sea. The monastery of St. Moack's, he says, is five leagues from Dol going towards Chausey, and one league N.N.W. of the Bourg de Lhan-Kafruth. The writer has therefore placed the Bourg on the great military road, a position which agrees nearly with Manet's description of its situation; the line of the road itself is copied from one of his maps. The monastery is of course placed a league N.N.W. of the Bourg. At the Bourg there are now about 6 fathoms of water at low water, and at the monastery which falls close to Manet's coast-line previous to 709, there are between 7 and 8 fathoms at low water. He says that Rivallon, brother to Judicaël,† King of Bretagne, had in the Bourg one of his hunting-boxes. Violent as he was, in a fit of passion he caused the monastery of St. Moack to be burnt; but afterwards, being penitent, he re-established it in a better state.

---

* In his foot-note, p. 100, Manet mentions, "l'affreuse nuit du 9 au 10 janvier, 1735," in which the floods surmounted the tops of the embankments, and flooded a vast extent of marsh, to which continual and abundant rains added. The inundation lasted six months in great force.

† Judicaël succeeded Alain le Long, who died A.D. 690.—Morery's 'Dictionary.'

St. Scubilien founded the monastery of Menden 1600 toises (3410 yards) N.N.E. of the Isle of Aaron (on which St. Malo stands), which Manet says must be carefully distinguished from Mandan, which is near Chausey. The sounding at *Menden* at low water is, by M. Beautemps-Beaupré's chart, 24 French feet, equal to 25½ English feet.*

The monastery of Mandan was 6 miles west of St. Pair (a village on the coast 2 miles south of Granville), there are there 5½ fathoms at low water.

The monastery of Taurac or Caurac, was 1700 toises to the east of Cancalle Point, or 2 English miles and 203 yards. At this place there are about 9 fathoms at low water.

Now, supposing the positions of the monasteries and Bourg to have been correctly given, they evidently help to an approximation to the amount of sinking. Because if we assume the Bourg and each monastery to have originally stood (say) 10 feet above high water (they can scarcely have been less), and add to that the rise of tide, and the sounding for each place, the sums will be about the total sinkings. Thus:—

	Sounding.		Above High Water.		Rise of Tide.		Total Sinkings.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.
Bourg of Lhan-Kafruth	36	0	10	0	54	0	100	0
St. Moack's monastery	45	0	10	0	54	0	109	0
Menden monastery	25	6	10	0	46	0	81	6
Taurac, or Caurac monastery	54	0	10	0	54	0	118	0
Maudan monastery	33	0	10	0	50	0	93	0
Average	..		..		..		100	3

M. Edouard le Hericher in his 'Origines Germaniques,' states that "Bourg," under a great number of forms—as Burel, Buret, Buri, Buron, Bur—indicates generally a village *on a hill*, an *elevated habitation*. Thus Lhan-Kafruth may have been on *lofty ground*, which may mean that the sinking was greater than the Table expresses.

But there may be seen on the chart, within the space which appears to have sunk in 709, occasional soundings of 11 fathoms or 66 feet. It will not be correct to take the average, because that would bring the original positions of St. Moack's and Taurac, *below* the level of high water, which cannot have been the case. Ought we not rather to take the maximum, and say the sinking in the Bay of Mont St. Michel has not been less than 118 feet? And may it not have been more than that? For if Abbé Manet can be depended on, the height of the Mont is 176 feet less than it was formerly, and probably only a small part of that is due to alteration (lowering of height) of buildings.

The Low District Theory at Guernsey.—Duncan's 'History of Guernsey' states, and the present writer has personally assured himself of the accuracy of the statement, that peat is dug at very low tides. This peat is justly supposed to have been derived from some catastrophe affecting the coast of the island, as well as the other islands (and the neighbouring coast of France where similar events have occurred) at some unknown date or dates. Whole trunks of trees have been found imbedded in this peat, and there is no doubt this timber grew where it was found. "This district was probably extensive, and enclosed a large portion of Rocquaine Bay, the Hanways or Hanois rocks (a dangerous reef which extends about 2 miles from Pleinmont Point), and the extremity of the island of Lihou. It may have passed beyond the Bays of La Perelle, Vazon, Cobo, the north-western limit of Clos du Valle, including the whole extent of the Braye." The author of the passage just quoted, says also in the 'Archæological Journal,' when speaking of a cromlech at L'Ancresse Bay, on the north of Guernsey, as follows:—"At the period it was constructed, the sea was at a greater distance from the site of the hill than at present, for the whole neighbourhood bears marks of the inroads of that element: the near approach of the sandy hills around it was caused by those events which have so materially changed the coast of these islands, as well as that of the opposite continent."

---

* Manet gives in one of his maps a league as 2400 toises; and in Sir John Herschel's 'Outlines of Astronomy,' 1864, p. 716, the toise is stated at 6·394593 British feet. Hence a French league is 5115⅔ yards. These measures we have adopted.

So far the eminent authority quoted and the present writer are agreed. But it is submitted to the reader that the proposition contained in the following short quotation from the same eminent authority is inadmissible, because it is impossible. He says "that the whole (of the submarine peat and trees) was the produce of a low district which was protected from the power of the Atlantic wave, by rocks and silted materials at a certain distance from the present coast-line."

Now that supposed mass of rocks and silted materials must have been watertight, else the sea-water would have percolated through it, and have made the supposed low district a lake; and if so the trees could not have grown. On the other hand, if the supposed natural embankment was watertight, we are met by another insuperable difficulty derived from the following considerations. Guernsey consists of igneous rocks like the Isle of Bute, where rain gaugings have been taken, and the produce of the streams has been measured all the year round. The result was found to be that a little more than half the annual rain flowed off by the brooks and streams. Applying this fact to Guernsey, where the annual rainfall averages 35 inches, we shall have an annual "flow" of about half a yard in depth. And assuming the most probable situations for the supposed low district and natural embankment of "rocks and silted materials," the latter would have extended along a line parallel to, and at a little distance off the present north-west coast of Guernsey; such line being at present chiefly occupied by rocks. The portion of sea within would have had an average breadth of about half a mile. It would follow then that the total gathering ground comprised between the "watershed" line, or summit ridge of the hills of Guernsey, and the "natural embankment" would comprise 9,934 acres; and taken at half a yard deep, would yield annually about 24 millions of cubic yards of water. This would fill the assumed low district, taken at half a mile wide, to the average depth of 9 feet 3 inches annually, and of course in a few years have been fatal to the trees; or, rather, it would have been impossible for them ever to have grown there. The Low District theory ought therefore to be abandoned.

Another way of arriving at a similar conclusion, but without quantities, is to remember that there are about half-a-dozen brooks perpetually running day and night into the supposed low district, which would be sure to fill it and kill the trees.

---

5. *Further observations on the Temperature, Specific Gravity, &c., of the Seas between England and India, supplementary to the Memoir published in the 'Journal of the Royal Geographical Society,'* vol. xxxv., p. 147.

By HENRY TOYNBEE, F.R.A.S., and F.R.G.S., Master Mariner.

BEFORE my leaving England last August, Commander George, R.N., kindly undertook to extract data from the Board of Trade logs with which to form a